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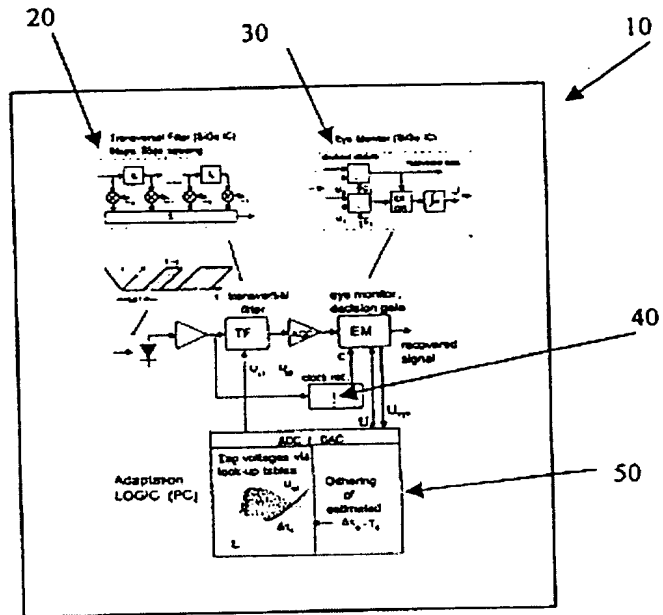


FIG. 1 (Prior Art)

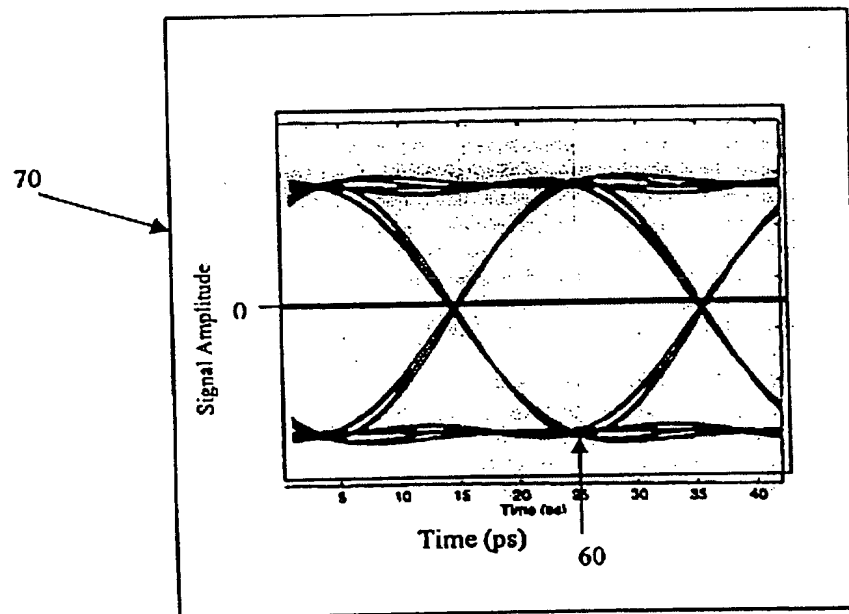


FIG. 2a (Prior Art)

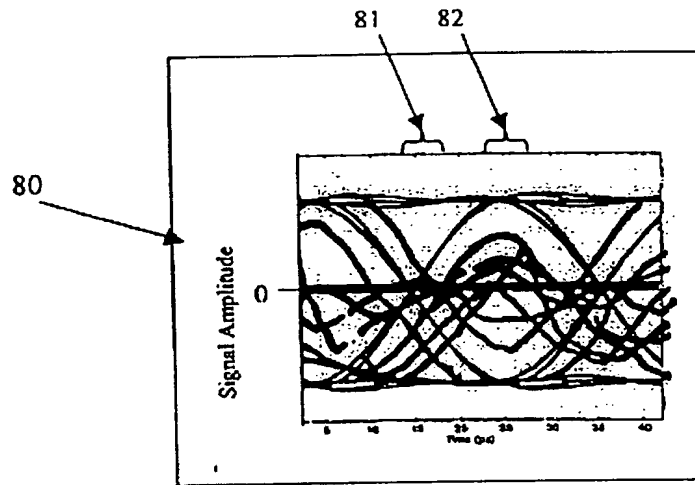


FIG. 2b (Prior Art)

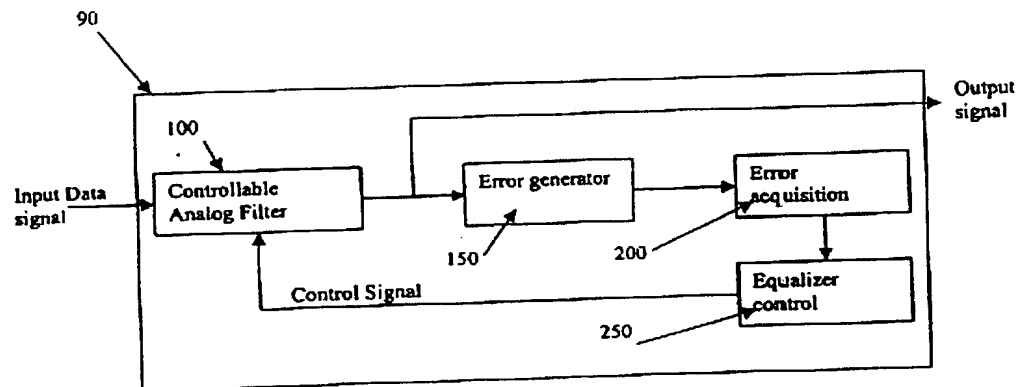


FIG. 3

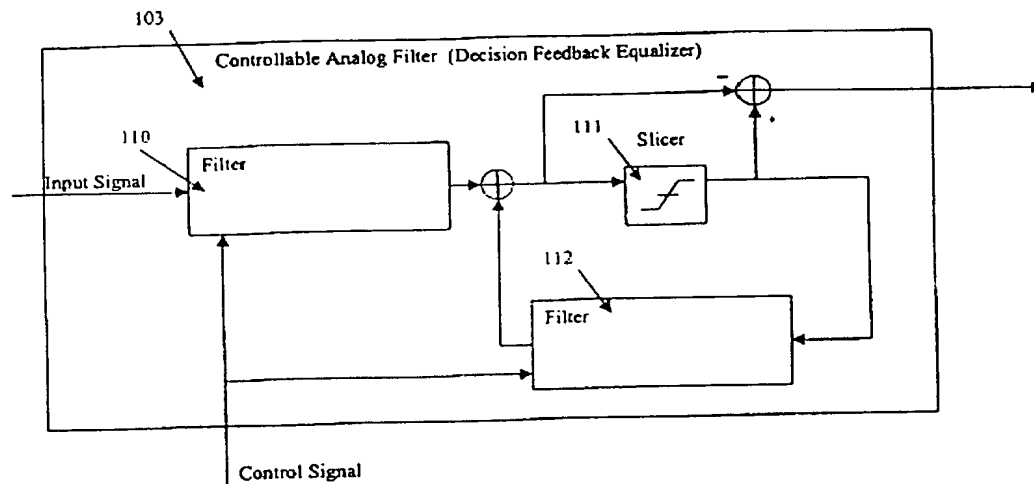


FIG. 4

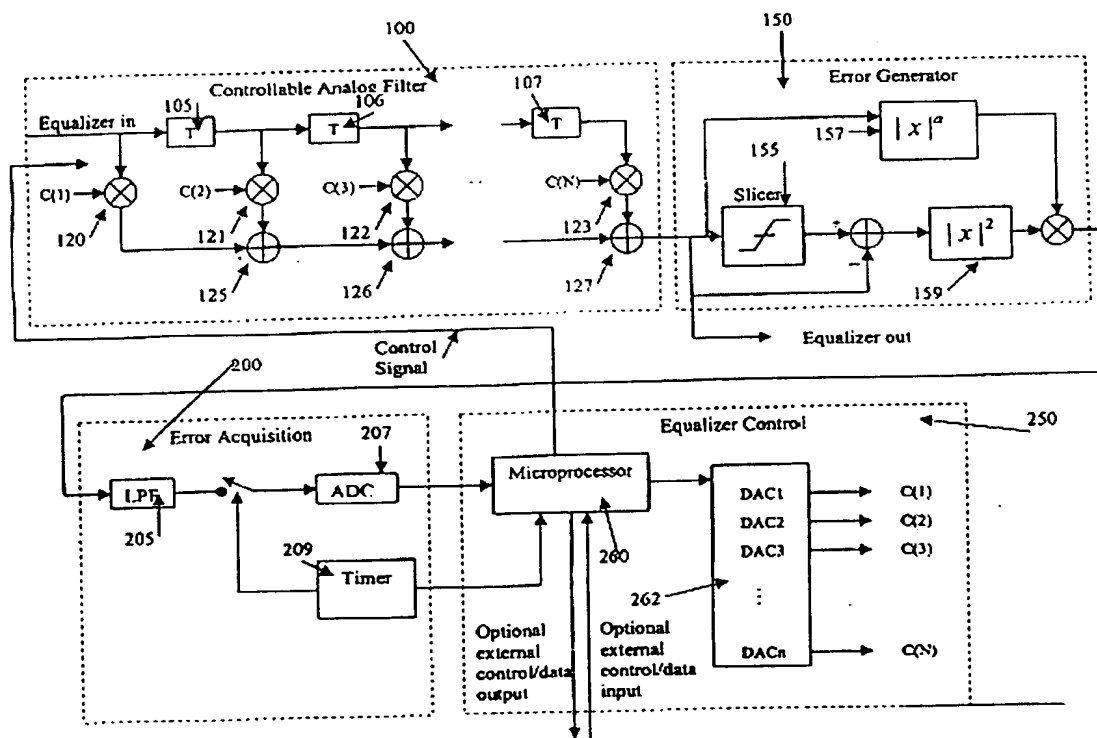


FIG. 5

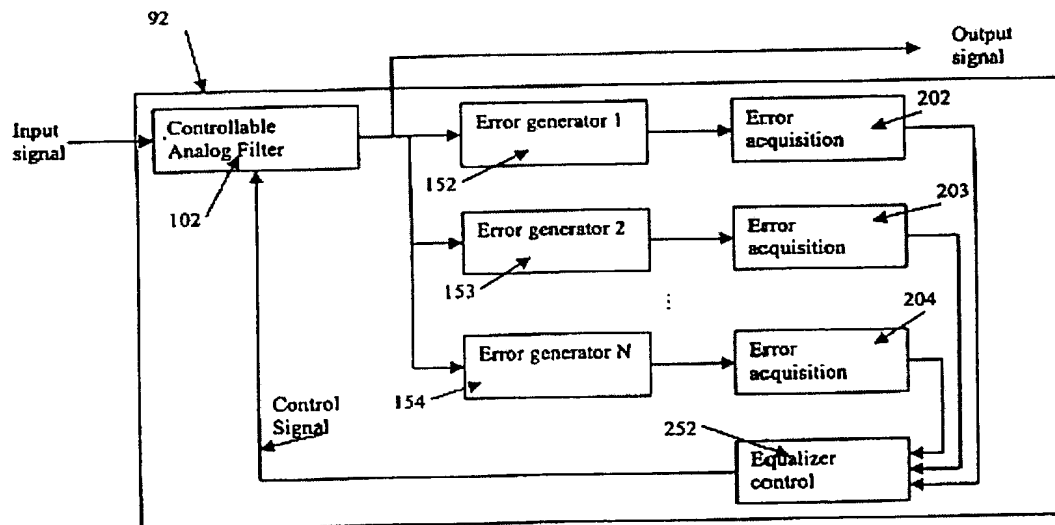


FIG. 6

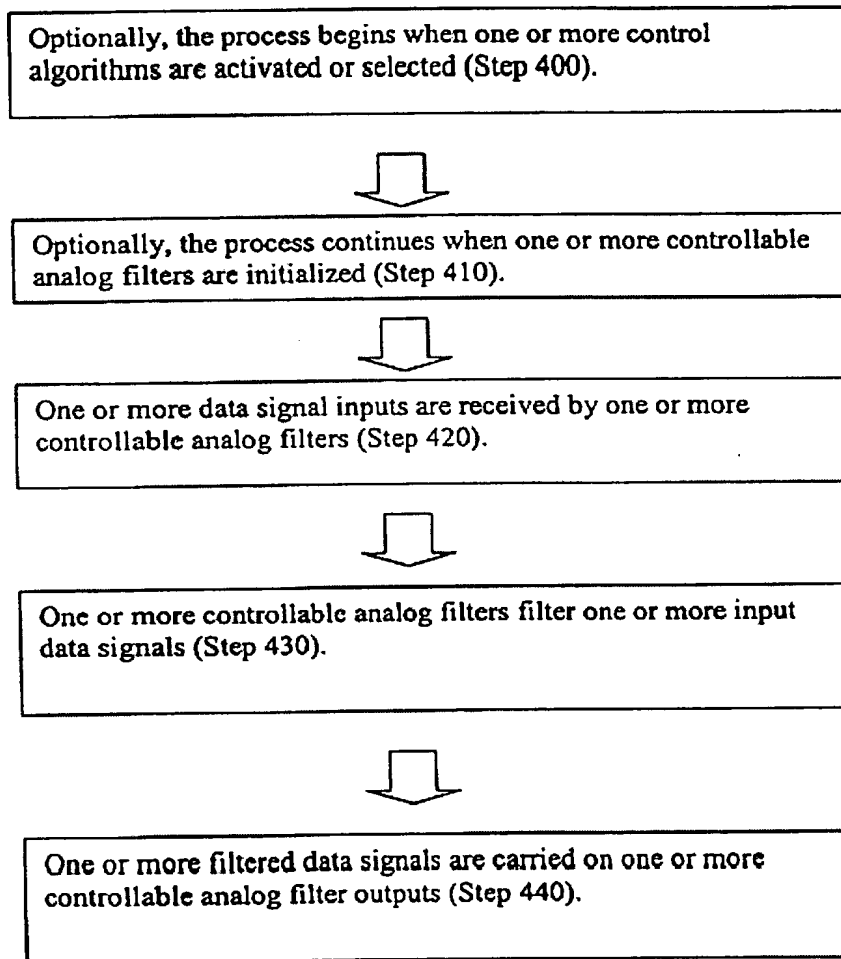


FIG. 7a

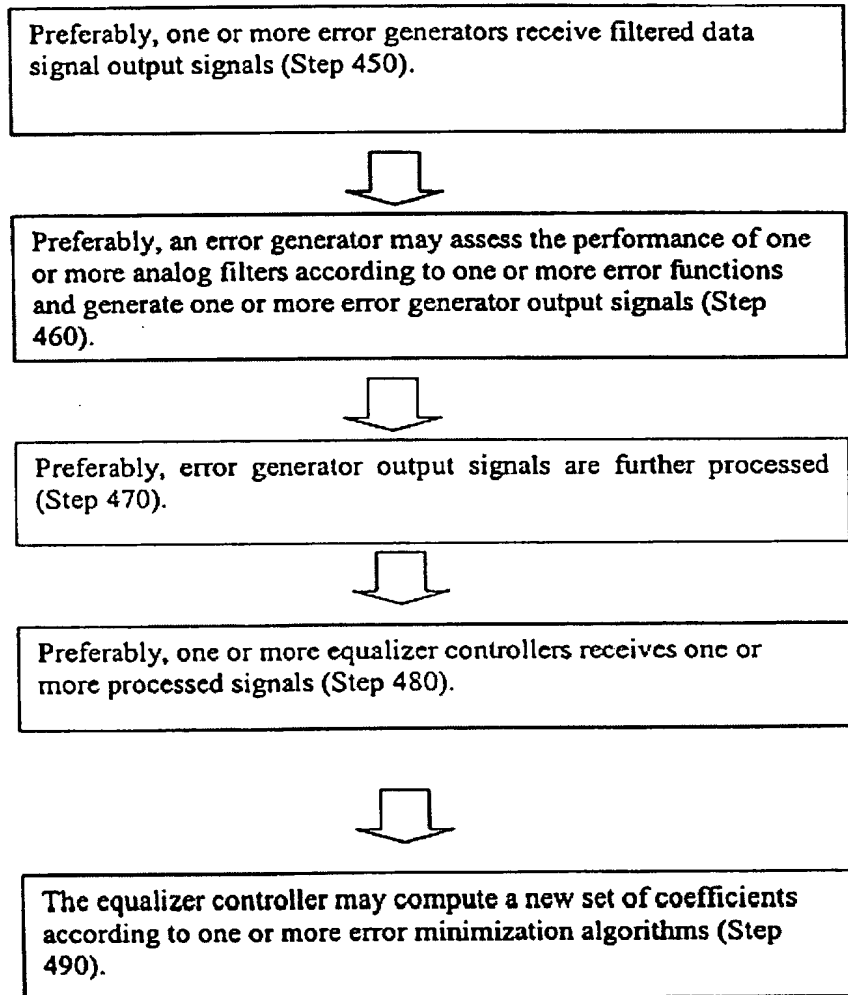


FIG. 7b

One or more equalizer controllers control the controllable analog filter by providing control signal inputs that are used to change controllable analog filter coefficients (Step 500).



Optionally, iterate one or more times by returning to Step 420 (Step 510).

FIG. 7c

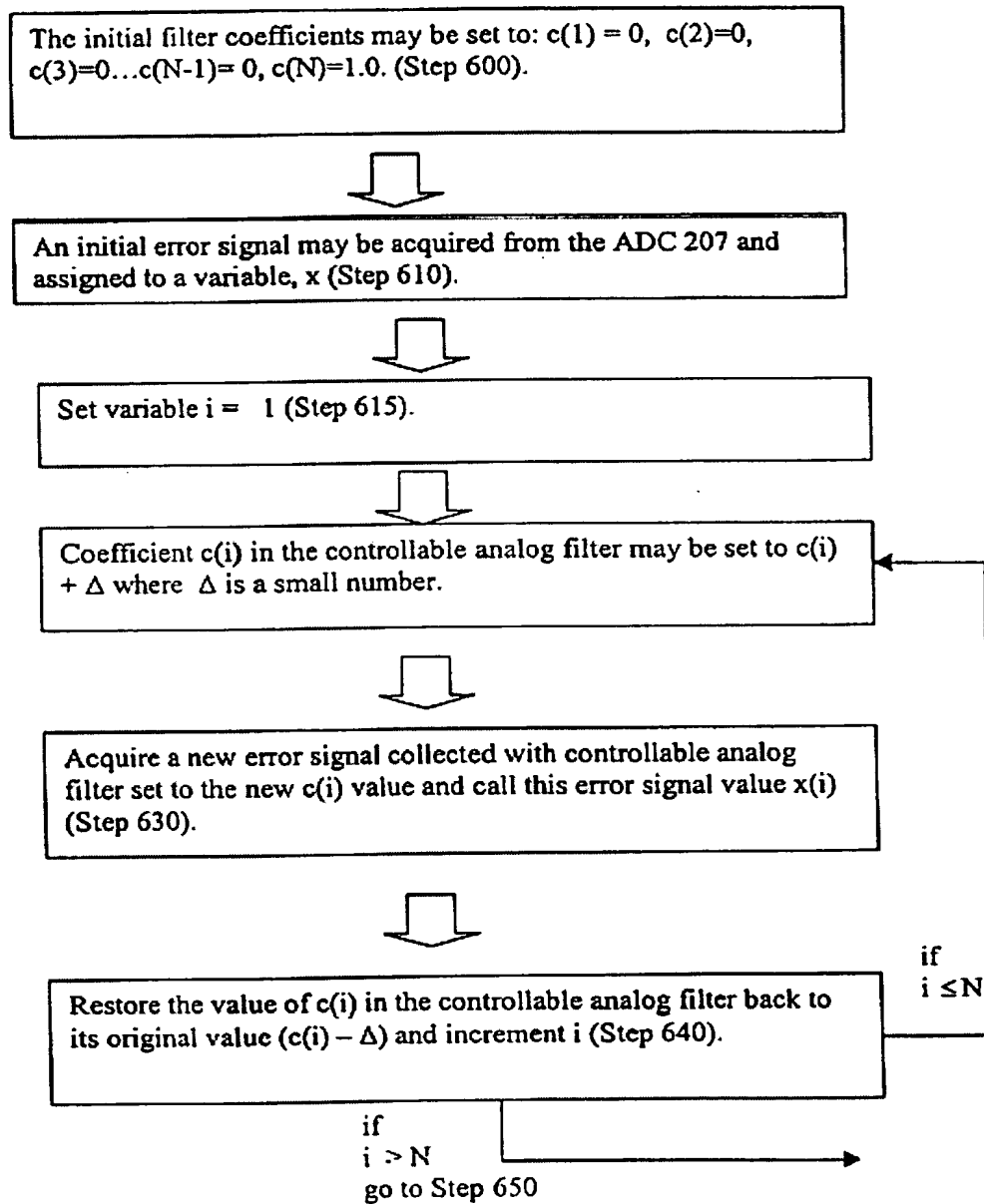


FIG. 8a

Compute the gradient vector. (Step 650).



Perform a line search to find the value of t that minimizes the error signal for coefficient values $[c(1) \ c(2) \ \dots \ c(N)] - t * [g(1) \ g(2) \ \dots \ g(N)]$ for $t \geq 0$. The notation $[c(1) \ c(2) \ \dots \ c(N)]$ denotes the N -dimensional vector whose i 'th component is $c(i)$ (Step 660).



Validate results and discard invalid results (Step 665).



Set the coefficients for the controllable analog filter to:
to $[c(1) \ c(2) \ \dots \ c(N)] = [c(1) \ c(2) \ \dots \ c(N)] - t_{\min} * [g(1) \ g(2) \ \dots \ g(N)]$, where t_{\min} is the value of t determined according to the line search executed in Step 660 (Step 670).



Optionally, return to Step 610 (Step 680).

FIG. 8b

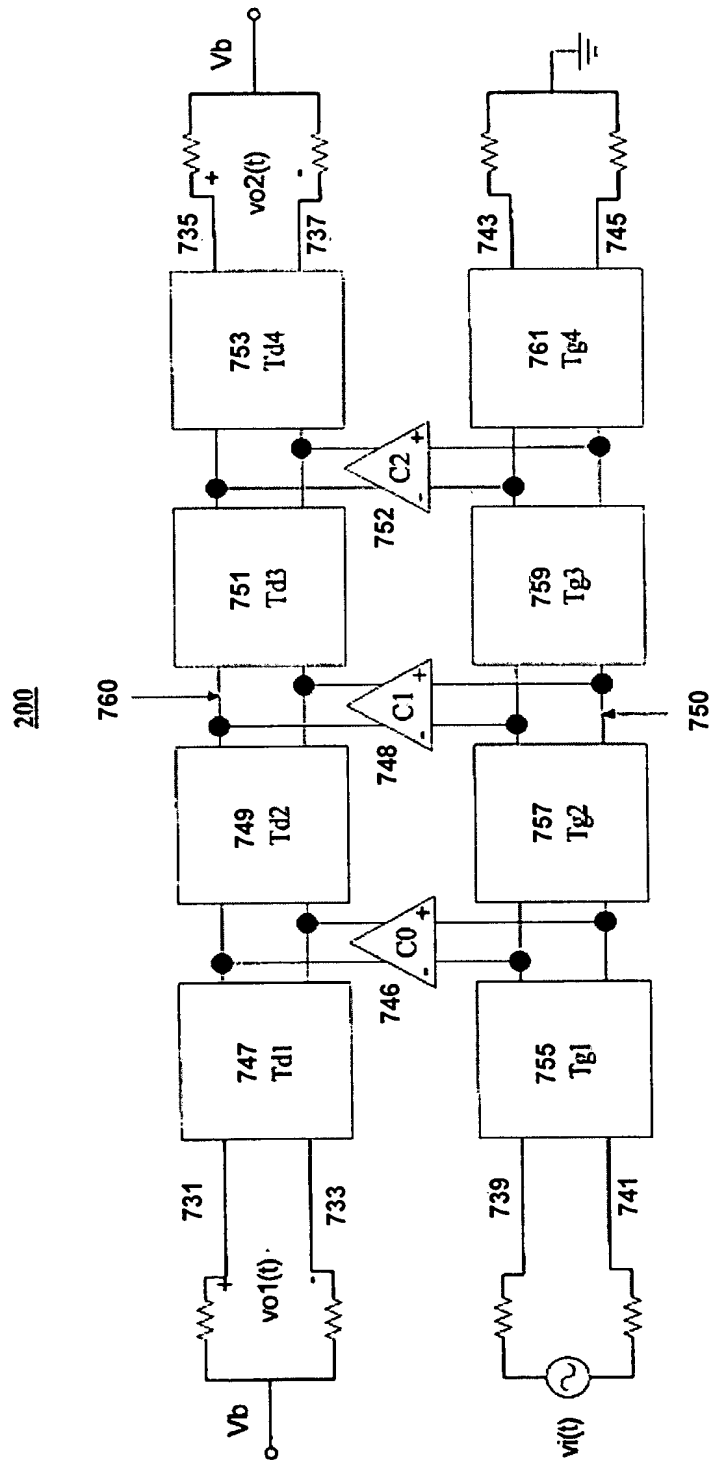


FIG. 9

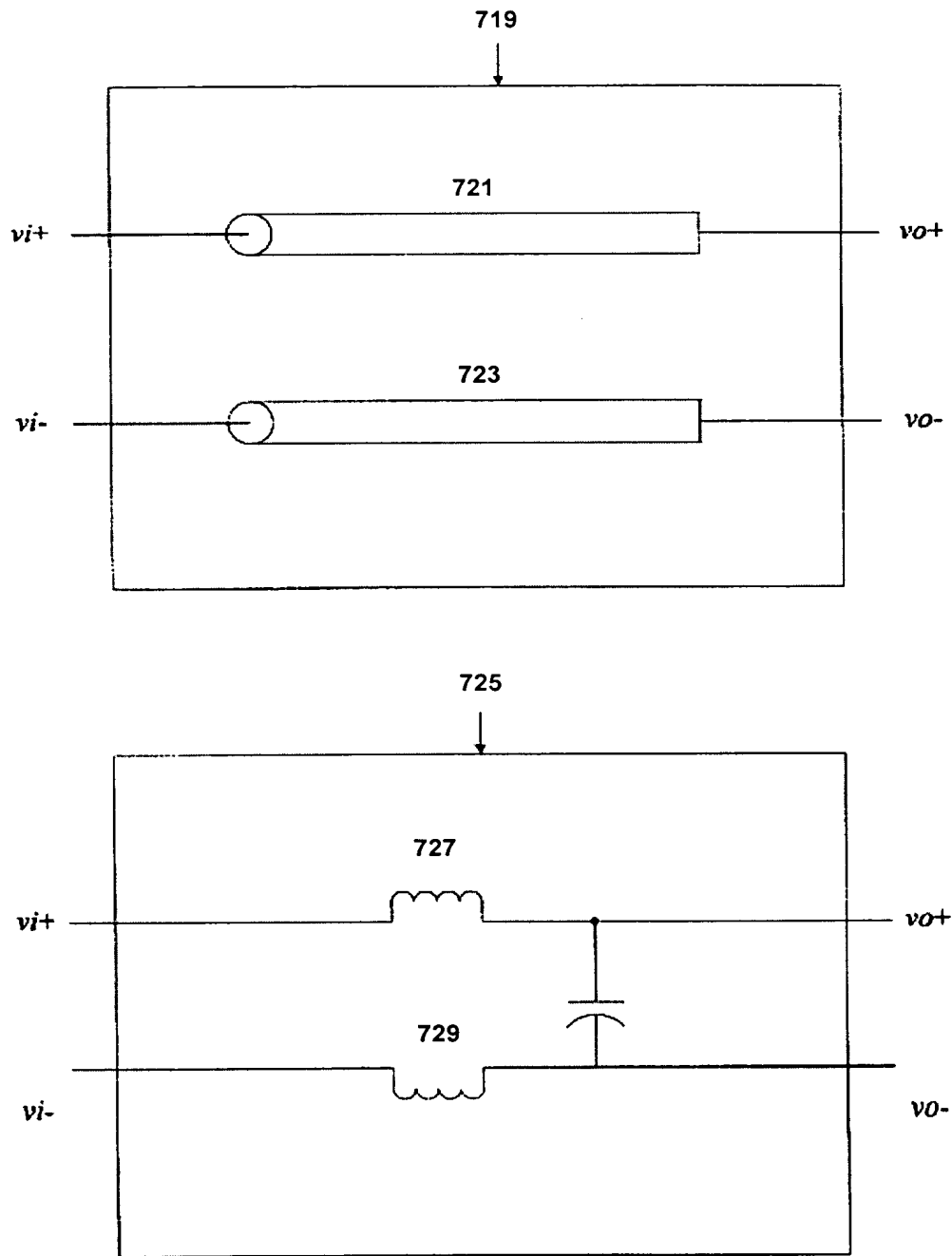


FIG. 10

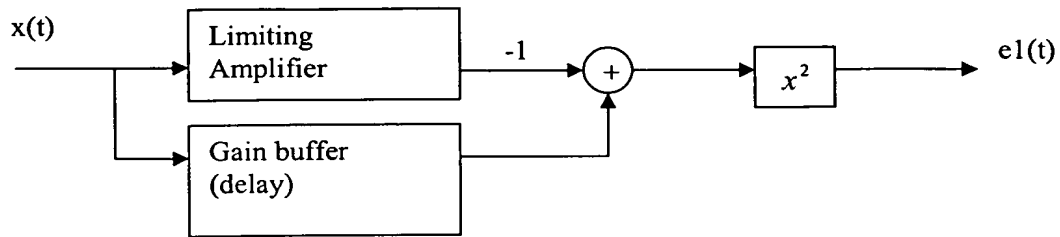


FIG. 11

FIG. 12a

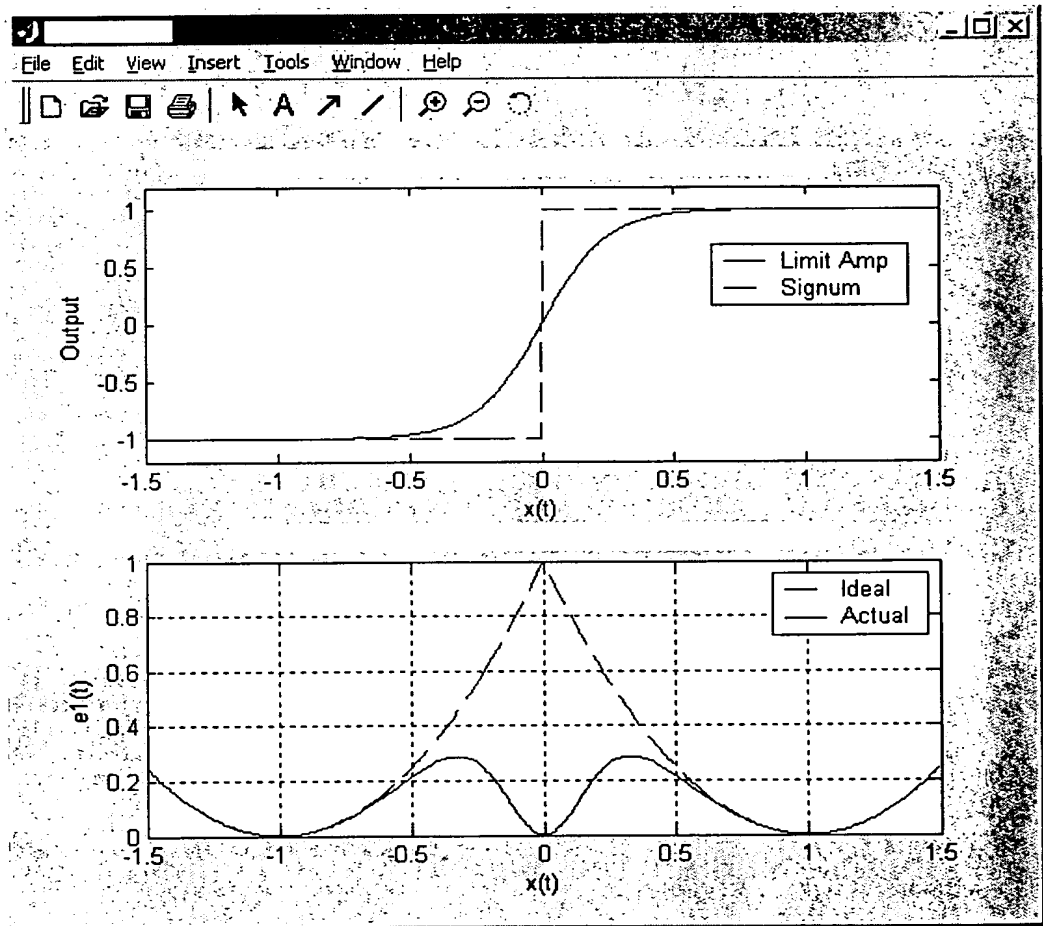


FIG. 12b

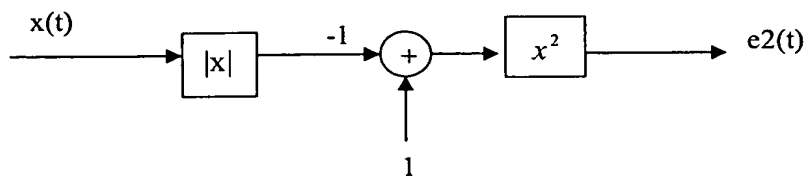


FIG. 13a

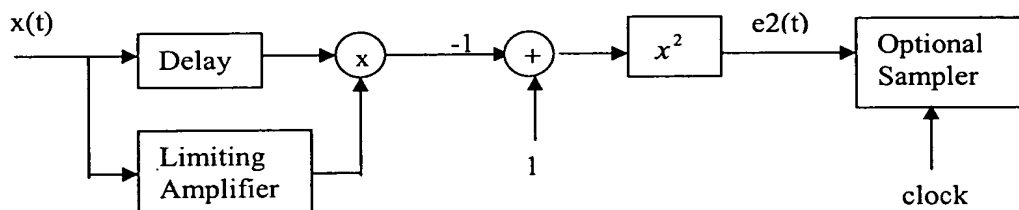


FIG. 13b

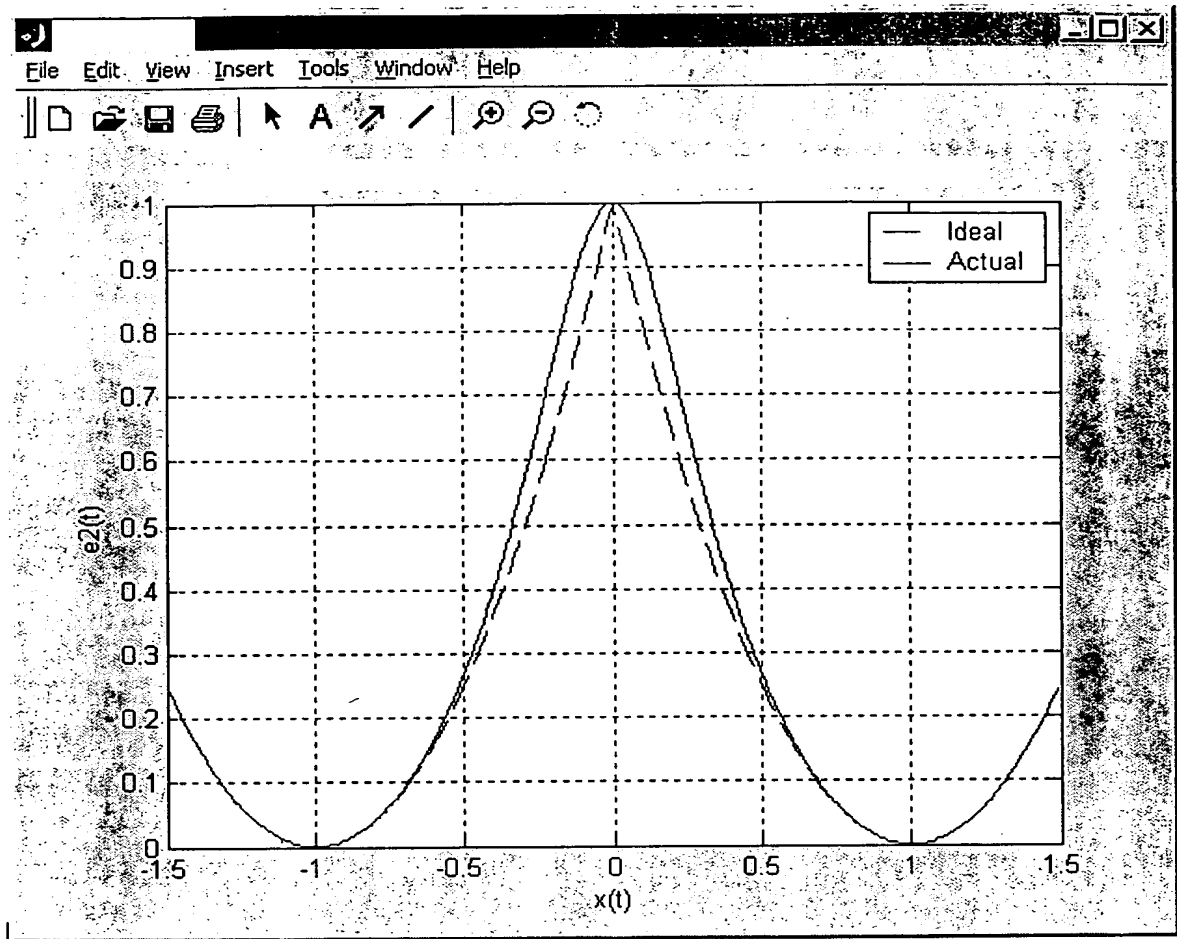


FIG. 14

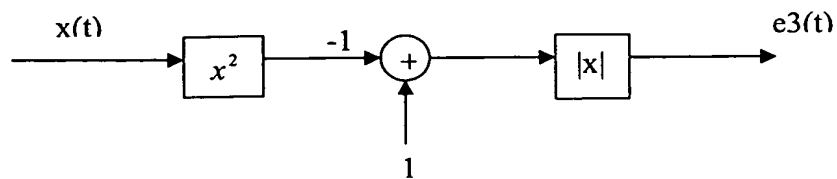


FIG. 15

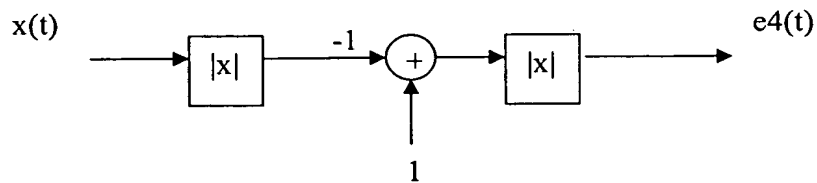


FIG. 16

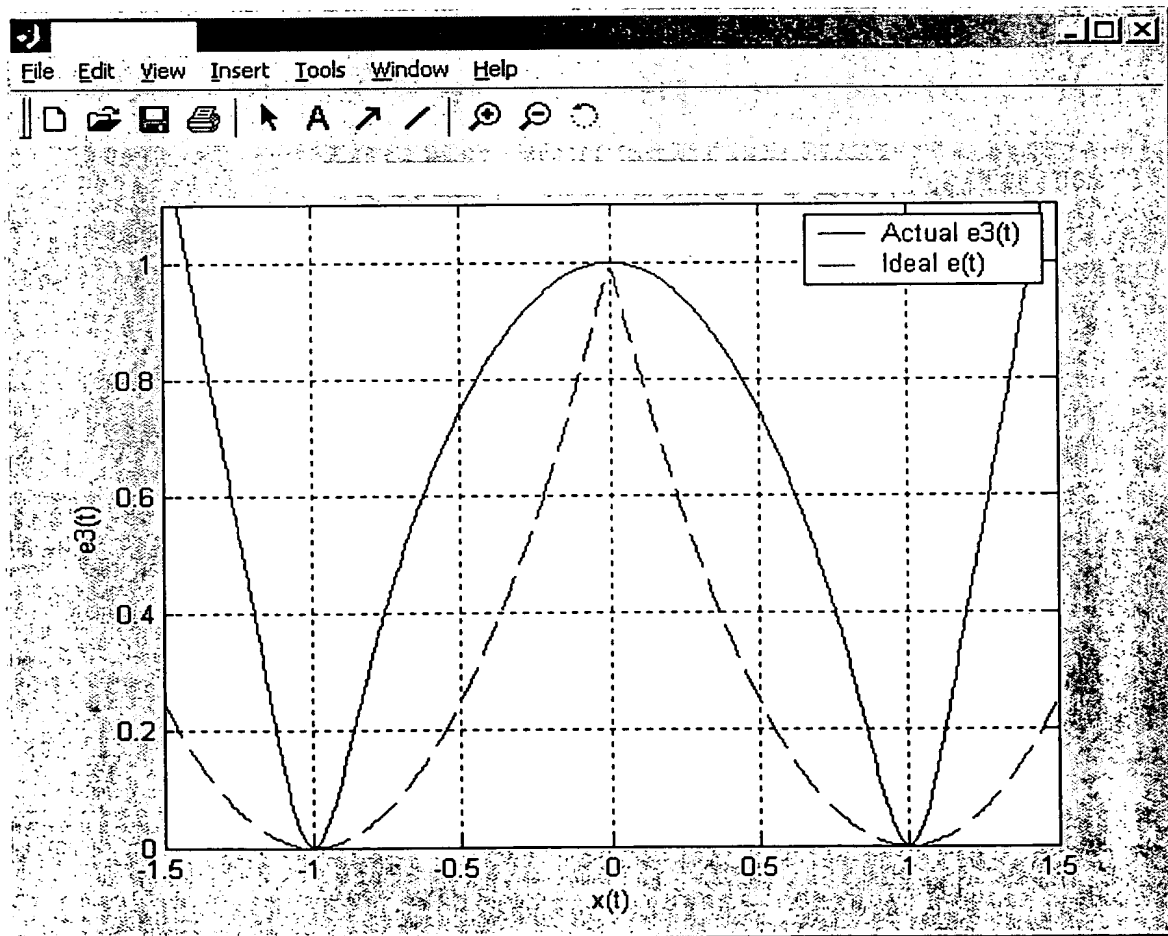


FIG. 17

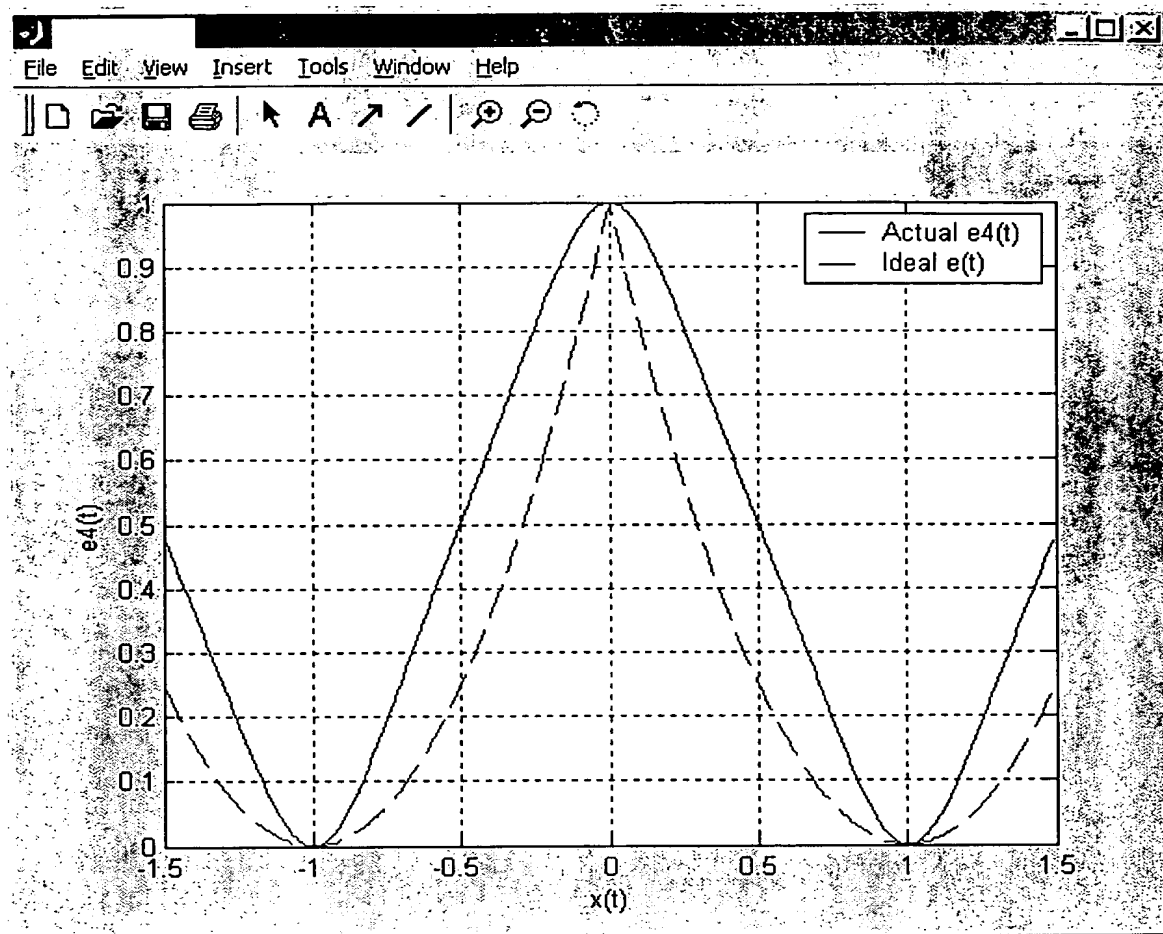


FIG. 18

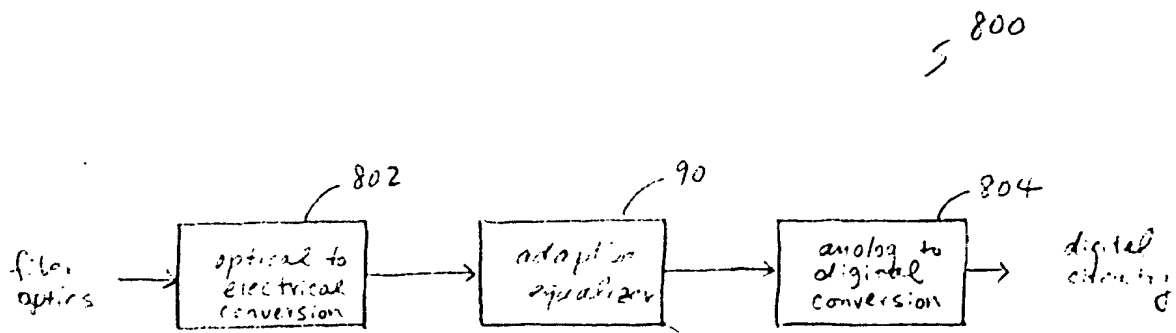


FIG. 19

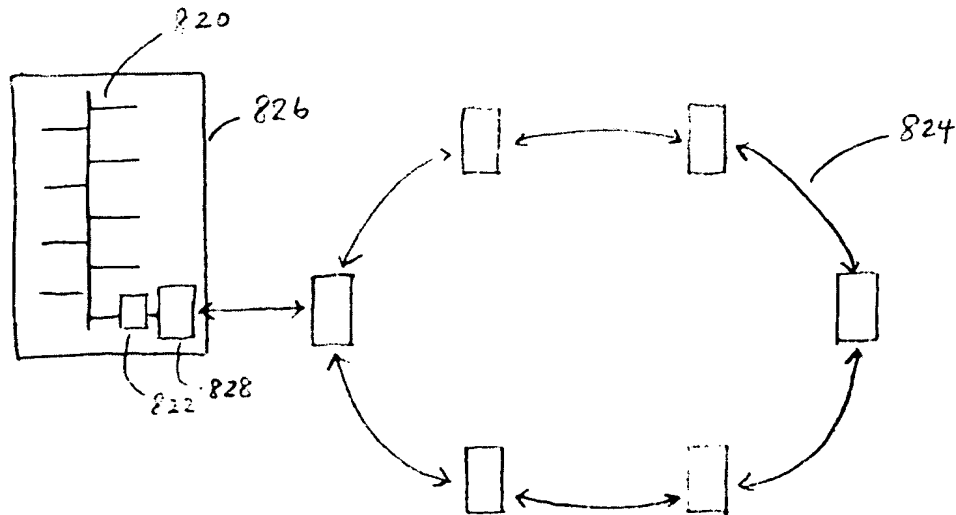


FIG. 20

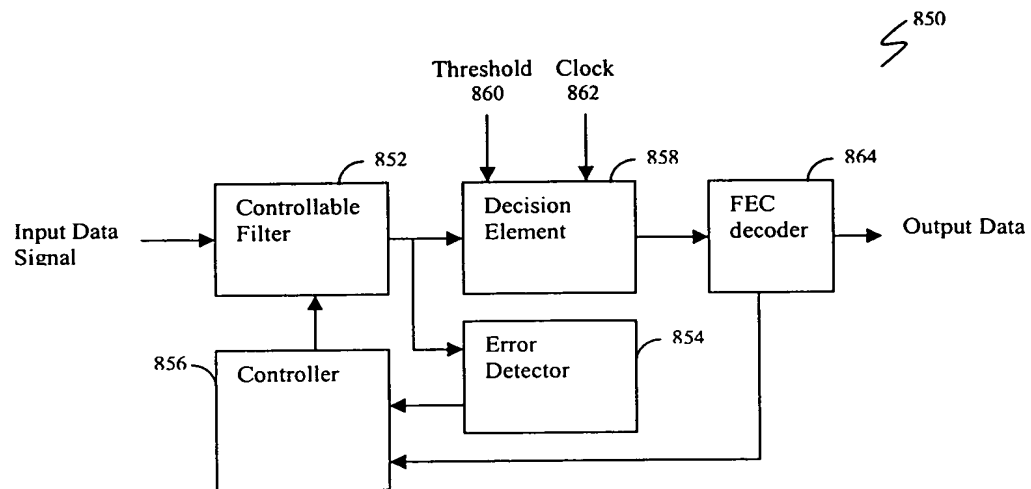


FIG. 21

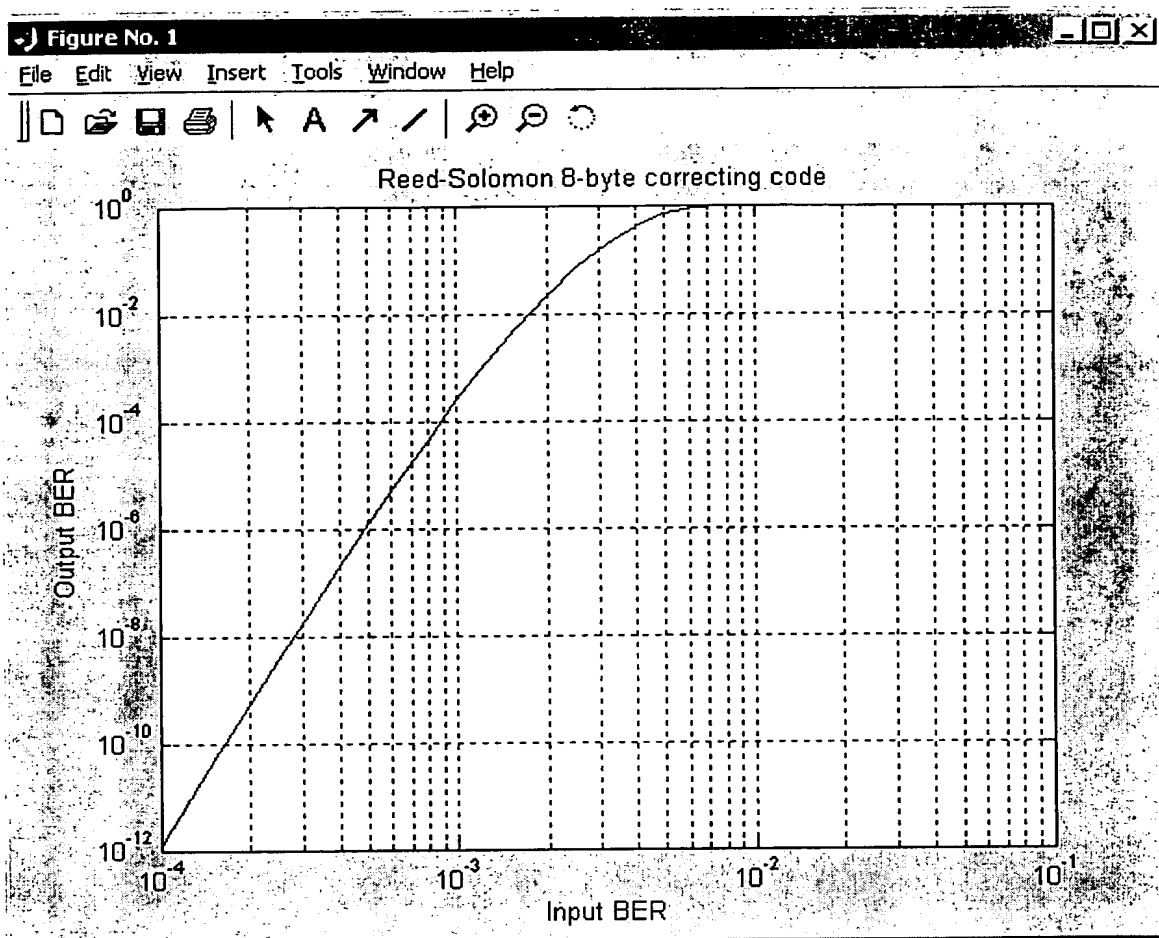


FIG. 22

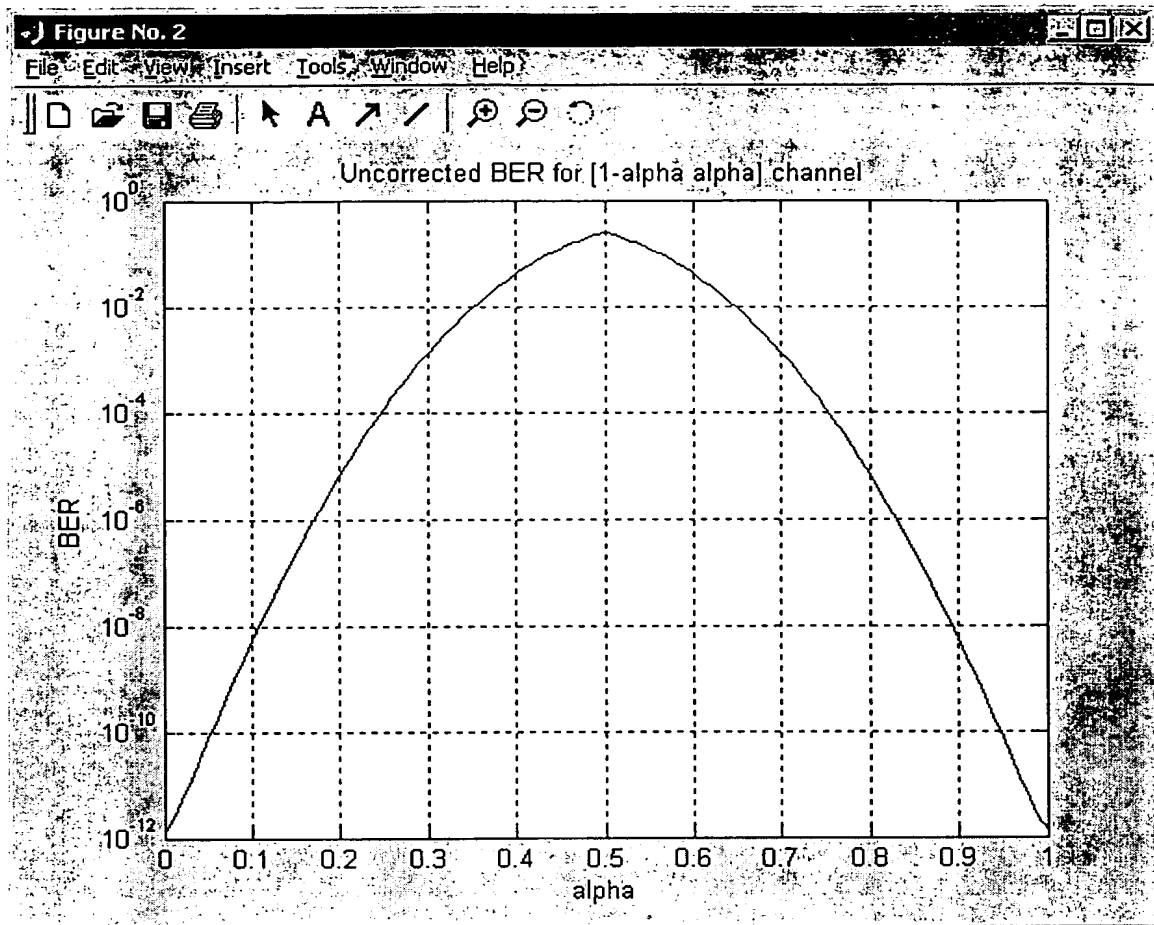
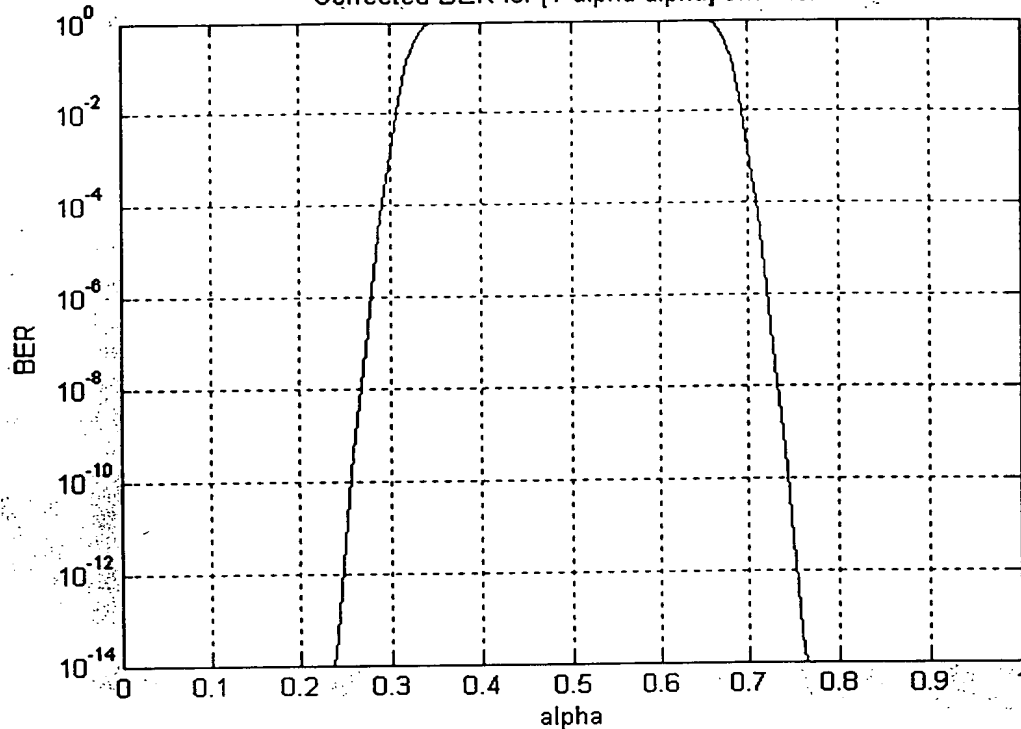


FIG. 23



21

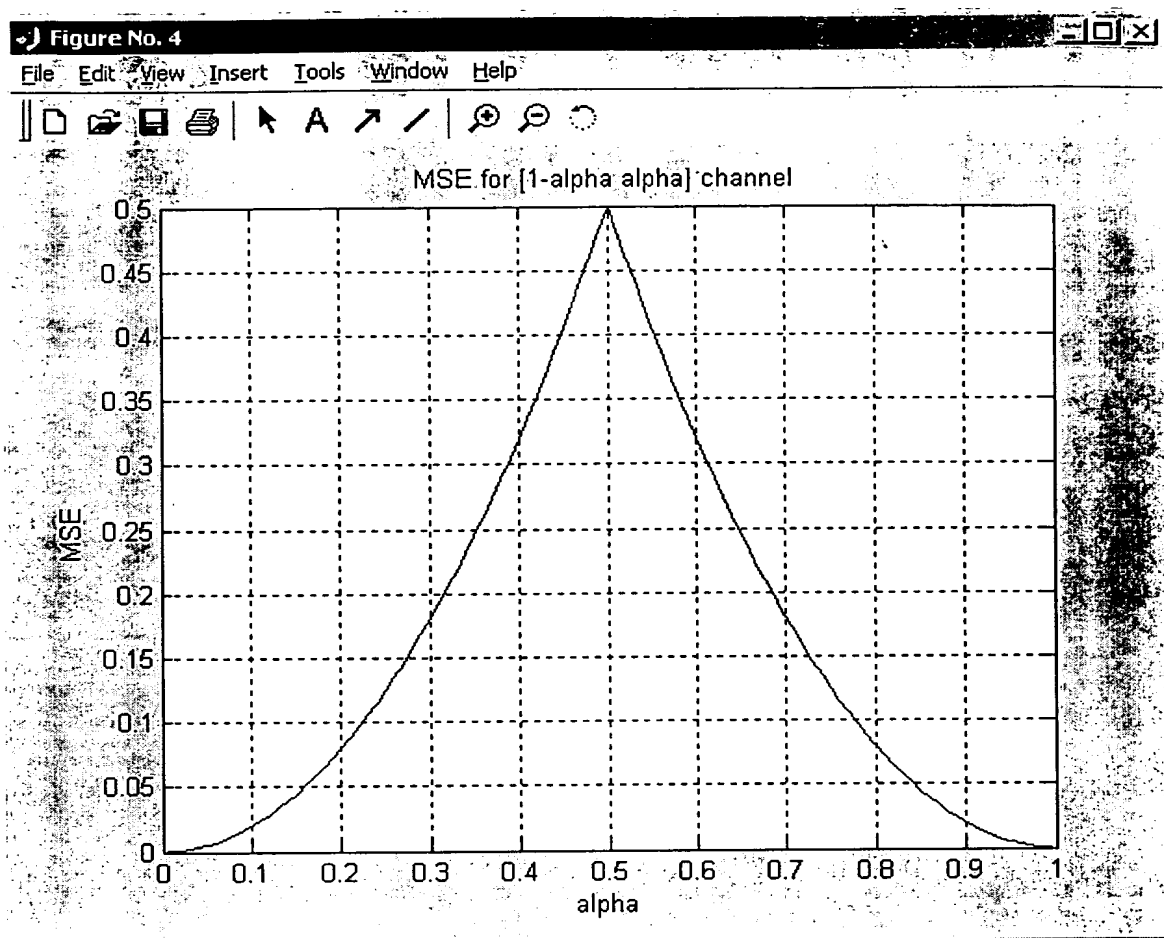


FIG. 25